

REMARKS

This Amendment is in response to the Official Action dated January 9, 2008. Claims 3-6, 9, and 14-16 have been amended, and claims 1, 2, 7, 8, and 10 have been cancelled, and claims 20-23 have been added. As such, claims 3-6, 9, and 11-23 are pending in this application. Claims 3, 9, 14, and 17 are independent claims. Reconsideration and allowance is requested in view of the claim amendments and the following remarks.

Support for the amendments is found in the application as filed. For example, grid splitting means and steps are found in Figs. 17-18B. Support for the interpolation step is found in Figs. 16 (S9) and 21A-21D, and the specification page 34, line 28 and page 35, line 18. The use of designated grid points is discussed on page 41, lines 3-18. Support for claims 20 and 21 is found in the specification on page 39, lines 17-21 and page 41. Support for claims 22 and 23 is found in specification on page 38, lines 25-29.

Request for Information

The Office Action requests that any foreign office actions, search reports, and art cited in related foreign applications be provided in an IDS. Applicant submits that no such IDS is presently required, as four such IDSs have already been filed on February 11, 2005, November 29, 2007, February 25, 2008, and March 25, 2008. Should further material become available it will be submitted.

Allowable Subject Matter

Applicant appreciates that claims 17-19 are allowed, and that claims 10-12 would be allowable if they were written in independent form. Applicant notes that these claims are allowable in their own right, and not simply for the reasons set forth in the Office Action.

Applicant has amended claim 9 to incorporate the subject matter of former claim 10. Accordingly, claims 9 and 11-13 are now allowable in view of the Examiner's indication of allowability.

Applicant has also amended independent claims 3 and 14 to disclose similar subject matter to former claim 10, which the Examiner cited as the basis for allowing claims 10 and 17. Accordingly, these claims should now contain allowable subject matter.

Rejections under 35 U.S.C. § 112

Claims 5 and 6 have been rejected for failing to particularly point out and distinctly claim the subject matter of the invention.

Applicant has extensively amended claim 3-6 and believes the amendments overcome the rejection under 35 U.S.C. § 112. For example, claim 6 now recites “*a data obtaining means for obtaining the horizontally corrected image from said storing means.*” Claim 5 has also been amended to overcome the issues disclosed in the Office Action.

Rejections under 35 U.S.C. § 103

Claims 3, 7, and 14 have been rejected under 35 U.S.C. § 103 over AAPA in view of U.S. Patent Pub. No. 2002/0196472 to Jasa; Claims 4-6 and 15-16 have been rejected under 35 U.S.C. § 103 over AAPA in view of Jasa, in further view of U.S Patent No. 6,538,691 to Macy.

Claim 3 now recites:

An image processing apparatus for correcting an original image having distortion, comprising:

grid splitting means for performing a grid split on the original image, according to the control signal supplied from the user interface;

an encoding means for encoding correcting parameters, derived at grid points obtained by said grid split, into a correction vector;

decoding means for decoding correcting parameters and supplying the decoded correcting parameters to the image processing apparatus;

horizontal correcting means for correcting distortion along the horizontal direction of said original image by performing a one-dimensional horizontal interpolation operation between designated pixels, corresponding to grid points, using horizontal correcting parameters from the correction vector, wherein the horizontal correcting parameters indicate distances in the horizontal direction by

which the horizontal correcting means adjusts the designated pixels in the original image; and

vertical correcting means for correcting distortion along the vertical direction of said original image by performing a one-dimensional vertical interpolation operation between designated pixels, corresponding to grid points, using vertical correcting parameters from the correction vector, wherein the vertical correcting parameters indicate distances in the vertical direction by which the vertical correcting means adjusts the designated pixels in the original image.

With respect to claim 3, neither AAPA, Enomoto, Jasa, nor Macy teach or suggest “*grid splitting means for performing a grid split on the original image, according to the control signal supplied from the user interface; an encoding means ... decoding means ... horizontal correcting means for ... performing a one-dimensional horizontal interpolation operation ... [and] vertical correcting means for ... performing a one-dimensional vertical interpolation operation.*”

Page 14 of the Office Action states that claims 17 thru 19 are allowable for having the “limitation of splitting the grid according to a control signal supplied from a user interface. This limitation in conjunction with the limitations of encoding, decoding, and interpolation was not found in the known prior art...” These similar features are now recited in all the independent claims and therefore Applicant submits that these claims are also allowable.

Therefore, Applicant respectfully requests that the rejection of claims 3-8 and 14-16 under 35 U.S.C. § 103(a) be withdrawn.

Applicant also submits that with respect to claim 22, neither AAPA, Enomoto, Jasa, nor Macy teach or suggest “*the grid splitting step for performing a grid split on the original image, creates a grid coarser than the original image such that the width of each grid in pixels along the x and y axes is an exponent of 2.*”

While the references do teach the use of transformations, none of the references disclose the use of a coarse grid to reduce the data that must be produced and transmitted to perform image

correction. Furthermore, none of the references discuss the use of such mechanisms to reduce the data overhead necessary to perform and transmit the parameters associated with image correction.

Claim 9 has been rejected under 35 U.S.C. § 103 over Enomoto in view of AAPA, in further view of Jasa; Claim 13 has been rejected under 35 U.S.C. § 103 over AAPA in view of Enomoto, in further view of Jasa.

Applicant submits that these rejections are moot, as claim 9 has been amended to incorporate the allowed subject matter of claim 10. Claim 13 depends on now allowable independent claim 9. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-2 and 8 have been rejected under 35 U.S.C. § 103 over U.S. Patent Pub. No. 2002/0196472 to Enomoto in view of Applicant's Admitted Prior Art ("AAPA").

Applicant submits that these rejections are moot, as claims 1, 2, and 8 have been cancelled. Accordingly, withdrawal of this rejection is respectfully requested.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2803 from which the undersigned is authorized to draw.

Dated: April 8, 2008

Respectfully submitted,

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